

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A display driver for a ~~current driven~~ an active matrix electroluminescent display, the display comprising a plurality of electroluminescent pixels each pixel comprising a pixel driver circuit and a display element, each said pixel driver circuit including a drive field effect transistor having a gate connection for driving the associated pixel display element in accordance with a voltage on the gate connection, the display driver comprising:

~~a plurality of adjustable constant current generators each for driving a row or column of said display and each configured to produce an adjustable constant current that is coupled to establish said voltage on said gate connection of said pixel driver circuit;~~

a display element brightness controller configured to provide an output control ~~said plurality of adjustable constant current generators~~ to drive a ~~said gate connections~~ connection to control the electroluminescent output from a ~~said pixels~~ pixel;

a voltage sensor to sense a said voltage on [[a]] said gate connection; and

a power controller coupled to said voltage sensor for controlling an adjustable voltage power supply to each of said plurality of electroluminescent pixels adjustable ~~constant current generators~~, said power controller configured to read a sensed voltage on each said pixel gate connection to identify a display element having a maximum brightness relative to others of said display elements, wherein

said power controller and said display element brightness controller are being configured to increase said voltage on said gate connection of said pixel having said identified display element and to reduce said power supply voltage, in response to said sensed voltage to a point where [[a]] the voltage of said adjustable voltage power supply is just sufficient for a said adjustable constant current generator with a highest output current to be able to maintain a current to said identified display element substantially equal to a predetermined current provide a highest, said increasing and said reducing in response to a said sensed voltage on said gate connection of said pixel having said identified display element less than a maximum available voltage for outputting from said brightness controller to said display and until said voltage on said gate connection substantially reaches said maximum voltage gate connection voltage, said highest gate connection voltage being determined by said highest output current in accordance with a compliance of said adjustable constant current generator with said highest output current.

2. (Canceled)
3. (Canceled)
4. (Previously Presented) A display driver as claimed in claim 1 wherein said voltage sensor is configured to sense the voltage on a said gate connection by sensing the voltage on an electrode of said display.
5. (Canceled)
6. (Canceled)
7. (Previously Presented) A display driver as claimed in claim 1 wherein a said pixel includes a photodiode, and wherein a photocurrent through said photodiode is determined by a said adjustable constant current to determine a brightness of said pixel.
8. (Canceled)
9. (Canceled)
10. (Canceled)
11. (Canceled)
12. (Canceled)
13. (Currently Amended) A display driver as claimed in claim ~~[[32]]~~ 1 wherein said power controller is further configured to increase said power supply voltage when said gate connection voltage of said brightest pixel has not reduced to less than a threshold value after a predetermined interval.
14. (Previously Presented) A display driver as claimed in claim 1 further comprising said adjustable voltage power supply.
15. (Canceled)
16. (Canceled)
17. (Currently Amended) A method of operating ~~a current-driven~~ an active matrix electroluminescent display, the display comprising a plurality of pixels each pixel

comprising an associated pixel driver and display element, each said pixel driver including a drive field effect transistor having a gate connection for driving the associated display element in accordance with a voltage on the gate connection, the display having a plurality of ~~adjustable constant current generators each for driving a row or column of said display with an adjustable constant current determining said voltage on said gate connection,~~ an adjustable voltage power supply coupled to provide a power supply voltage to each of said plurality of electroluminescent pixels ~~adjustable constant current generators~~, and a plurality of control lines for setting the brightness of each pixel, the method comprising:

~~controlling said plurality of adjustable constant current generators to drive said gate connections to setting~~ the brightness of pixels of the display using said control lines to drive said gate connections;

monitoring control lines of the display to sense said voltages on said gate connections to identify a display element having a maximum brightness relative to others of said display elements; and

reducing said power supply voltage and increasing said voltage on said gate connection of said pixel having said identified display element, responsive to said monitoring to a point where a voltage of said adjustable voltage power supply is just sufficient for a ~~said adjustable constant current generator with a highest output current to be able to~~ maintain a current to said identified display element substantially equal to a predetermined current ~~provide a highest,~~ said increasing and said reducing in response to a said sensed voltage on said gate connection of said pixel having said identified display element less than a maximum available voltage for outputting to said display and until said voltage on said gate connection substantially reaches said maximum available voltage ~~said gate connection voltage, said highest gate connection voltage being determined by said highest output current in accordance with a compliance of said adjustable constant current generator with said highest output current.~~

18. (Canceled)

19. (Canceled)

20. (Canceled)

21. (Canceled)

22. (Canceled)

23. (Currently amended) A method as claimed in claim 17 wherein a said pixel includes a photodiode and wherein a current through said photodiode is determined by said an adjustable constant current.

24. (Canceled)

25. (Canceled)

26. (Canceled)

27. (Original) An active matrix display driver configured to operate in accordance with the method of claim 17.

28. (Original) A display driver as claimed in claim 1 wherein said electroluminescent display comprises an organic light emitting diode display.

29. (Canceled)

30. (Canceled)

31. (Original) A method as claimed in claim 17 wherein said electroluminescent display comprises an organic light emitting diode display.

32. (Canceled)

33. (Canceled)